

ABSTRACT

The present invention mainly relates to a method and apparatus for measuring the concentration of a solute in a solvent. Disclosed is an apparatus or method for determining the concentration of a solute in a solvent of a solution in a container having a time-varying volume by analyzing two signals received from the solution, comprising: measuring the quantity of the two received signals, converting the two signals into two electro-optical or electrical signals, performing a mathematical transformation on the two electro-optical or electrical signals, and determining the ratio of the transformation components of the two electro-optical or electrical signals. The present invention can be used in various applications of determining the ingredient concentration of a fluid, such as a gas or liquid. Particularly, the present invention finds applications in blood analysis in a human body for measuring, for example, the glucose, triglycerol, cholesterol, or oxyhemoglobin concentrations of the blood.